

Hi, just a reminder that you're receiving this email because you have expressed an interest in Johnston County Center. Don't forget to add mhwarren@ncsu.edu to your address book so we'll be sure to land in your inbox!

You may [unsubscribe](#) if you no longer wish to receive our emails.

Feature Article, Feature Plant, A Veggie Tale, Quick Tip:, Ask an Expert,
Monthly Garden Tasks, Cool Connections, Upcoming Events



The Gardener's Dirt

Johnston County Center

July 2016

Feature Article

Septic Systems and Landscapes-What to do?

Marshall Warren, Horticulture Extension Agent

Many homeowners want to know what can be grown, if anything, over their septic drainfield. The existence of a septic system on your property means that you may have to plan your land use around it. Driveways, walkways, play areas, sheds, patios, landscape and vegetable gardens must all be designed with your septic system in mind.

How a Septic System Functions

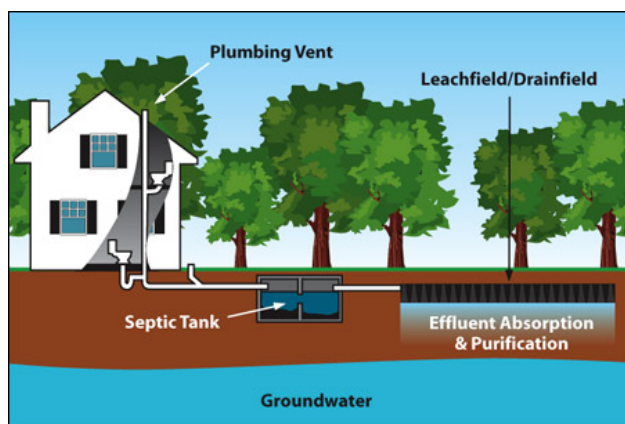


diagram by thesepticpro.com

Understanding how a septic system functions is essential to making sound decisions about how to landscape over the drain field. A standard septic tank will separate solids from liquids. The liquid effluent flows from the tank into a series of drain lines that allow the effluent to slowly percolate down through the soil in the drainfield. Soil microbes will act to filter and cleanse the liquid effluent before the harmful bacteria in it has a chance to reach ground water. These soil microbes require oxygen to function optimally, and perform less effectively in compacted and/or saturated soils. This is why it is recommended to keep excessive traffic off the drainfield to avoid over-compaction of the soils. It is also recommended to keep excessive moisture from flowing over the drainfield.

This can be accomplished by diverting water runoff and making sure that irrigation systems do not add excessive moisture

excessive moisture.

A typical septic drainfield is a series of perforated pipes that are set in trenches and buried with gravel aggregates and soil. The top of the drain lines are at a minimum depth of 6 inches and are typically 18 to 36 inches wide and can extend up to 100'. The individual drain lines will usually be 8½ to 10 feet apart. It is important to note that each drainfield system will vary from the next.

Locating your septic system is not always easy. Even if you find your septic tank, the drainfield can be many feet away. Homeowners can contact their local Environmental Health department to get a copy of their septic system permit. The permit will show the type of system, the location of the drainfield, and the designated repair area. It is important that the homeowner have a detailed layout of their system giving the locations and dimensions of individual components for their reference.

What's the Controversy?

A homeowner's reason for wanting to landscape and garden over the drainfield may be that it is the only sunny location on their property. This is often the case with new developments carved out of woodland areas. It may also be that the drainfield is in the front yard, and the homeowner wants to plant a landscape to accentuate the front of their house.

There is a lot of controversy on the topic of gardening within a drainfield. All agree that such areas need to be vegetated; the disagreement is on the type of vegetation. Lawn grass...definitely. Non-edible garden...sure, as long as the plants don't have invasive roots and will provide protection from erosion.

Edible garden... controversy abounds here.

Any plants installed on top of the drainfield will send roots down in search of water and nutrients and if they come in contact with the effluent can take up pathogens, such as viruses, and bacterial contamination, which can then infect anyone who eats the plants. As for the land around a properly functioning drainfield - go ahead and plant the vegetable garden. The soil outside of a properly functioning drainfield is not impacted by the effluent going to the drainfield. I keep saying "properly functioning" for a reason. If the drainfield is surfacing or has lush growth off to the side, effluent is going to inappropriate areas. Placing additional topsoil over the top of the drainfield in order to create a safe zone for vegetable plants to grow is not a good idea.



A setback of at least 5-ft (preferably 10-ft) should be used, with above-ground edible plants planted along the side closest to the drainfield. All agree that no plants with edible roots should be grown

in drainfields or close proximity to the septic tank. Examples would be carrots and potatoes. The garden should not be raised or mounded in such a way that water runoff to the drainfield is increased.

How close can I plant trees, and what types of trees should I plant and avoid?

The rule of thumb is that trees should not be planted closer than they are tall at mature height. So, a 50' tree - 50' away. A 25' tree - 25' away. In no case should a tree be planted within 25 feet of a conventional drainfield unless a root barrier is used. Trees with very aggressive root systems that should be avoided include weeping willows, red and silver maples, beeches, river birches, elms, poplars and sweet gums. Some trees with less aggressive root systems include cherries, crabapples, dogwoods, hemlock and oaks.

Can ornamental plants, perennials and ground covers be planted over the drainfield?

Generally, yes. It will depend somewhat on the type of

drainfield and proximity to soil surface. Vegetation is needed to utilize the water and nutrients from the effluent sent to the drainfield and to help prevent erosion. Shallow rooted herbaceous plants, such as annuals,





Photo courtesy of Pinterest

Shallow-rooted herbaceous plants, such as annuals, perennials, bulbs and ornamental grasses are generally good choices for use on a septic drainfield. Ornamental grasses also offer advantages of having a fibrous root system that holds soil in place, and provide year-round cover, but they are not recommended over the entire drainfield. Tall grasses like *Miscanthus* spp. or pampas grass are definitely not recommended because of their larger root systems.

How about Hardscaping?

The septic tank and drainfield should not be covered with hardscaping. The tank needs to be readily accessible for pumping and the drainfield needs available ground surface for oxygen transfer into the soil.

Resources : Dr. Diana Rashash - Area Specialized Agent - Water Quality/Waste Management

<http://www.clemson.edu/extension/hgic/plants/pdf/hgic1726.pdf>

Feature Plant - "Choice Plants" Selection

Boxwood - *Buxus sempervirens* 'Unraveled'

Choice Plants are superior selections of new and underused plants for the Southeast and Mid-Atlantic from the JC Raulston Arboretum landscape trials. Plants are chosen for their adaptability, beauty, and overall garden worth and are grown by local nurseries in a collaborative effort between the Johnston County Nursery Marketing Association and the JCRA. The first selections debuted in fall 2012. More selections will be added regularly to this line of exceptional garden plants. As the famed J.C. Raulston reminded us, "Plan-and-Plant for a Better World."

Boxwood has long been a mainstay of the landscape from the great gardens of Europe to the foundation plantings in neighborhoods across much of the United States. Boxwoods are used often for their formality in symmetrical foundation plantings and as formal hedges and parterres. The selection 'Unraveled' from the plantsmen at Yucca Do Nursery in Texas takes an abrupt departure from its buttoned-down relatives. Instead of forming an upright oval, it arches and cascades down for an elegant but very different effect. Unlike the old selections of weeping or pendulous boxwoods which were more irregular with drooping tips, 'Unraveled' is a true weeping plant.

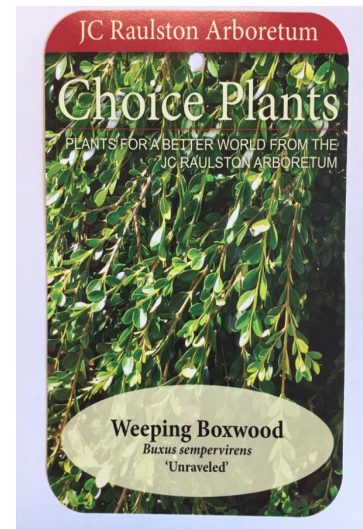


Photo courtesy of Marshall Warren

Specimens of the lovely *Buxus sempervirens* 'Unraveled' can be staked up with a central leader and allowed to form a small, weeping tree or allowed to grow as they will forming a spreading shrub 4' tall by about 7' wide. The plant makes an outstanding four season specimen flanking a doorway or growing in a decorative pot but can also be used in mass on a dry hillside or cascading over a wall. It can also be used much like a traditional boxwood but will give a softer, less formal appearance which fits in well with modern landscapes.

Boxwoods are often placed in full sun situations but are actually quite happy growing in shade, even in hard-to-landscape dry shady spots. While 'Unraveled' will tolerate heavy shearing, it is best to only trim out





Photo courtesy of Panther Creek Nursery

errant branches and to prune to enhance the graceful character of the plant. Keep new plants watered to get them established but after the first couple of years, boxwoods will tolerate significant drought especially in some shade. 'Unraveled' has proven to be relatively pest and disease resistant and should be a long-lived, all-season specimen in the garden.

A Veggie Tale

Okra!

Valerie Little, Master Gardener

Here is a very easy, trouble-free summer veggie to grow in our North Carolina heat with an opportunity to harvest plenty of pods from July to September. Okra is not fussy, grows from two and a half feet to over six feet depending on the variety, a minimal water lover and creates one of the most delicate hibiscus-like blooms for the garden enthusiast. The pods should be picked young and tender, but experience will teach you the best length and feel of the ripened pod. Eat them raw, boiled, baked, broiled, roasted, fried (my fave!) or even pickled.

Warning: okra is a daily or every-other-day gathering chore. If an event prevents you from visiting the summer garden, be prepared for some long, woody, tough pods that resemble a starchy sponge. Although not so good to eat, these older pods are good to save for seed next year. When harvesting, wear gloves to avoid any irritation from the hairs on the stems and use a sharp knife or pair of clean garden scissors to remove the pods from the plant.



Photo courtesy of Valerie Little



photo neurophy.wisc.edu.ext

For a family of okra lovers, 4-5 plants will do; however, if you enjoy growing enough to share with the neighbors or to fill your freezer, you might plant as many as 20 plants. There are several varieties available, but the shelf life is short, so plant 'em up. Enjoy okra year round in your soups and gumbo as the pod freezes well.

As you take in this summer's garden bounty, plan on including a few okra plants next year --or stop by the farmers' market to pick up a pound or two. I hope okra becomes one of your summer go-to veggies in the years to come!

For more information see - <https://extension.illinois.edu/veggies/okra.cfm>

Quick Tip:

Controlling Fleas in the Home and Landscape

Marshall Warren, Horticulture Extension Agent



Fleas may be a problem for you and your pets this time of year. Flea infestations usually get started in the spring and their numbers can explode in the summertime. Flea control can be challenging because of all the different places that must be treated. The goal of flea control is to eliminate existing adult fleas on pets, then take actions to eliminate larval fleas that develop off the animal.



Photo by Jim Kalisch,
UNL Department of Entomology

The first action is to treat the animal to kill adult fleas

Some common products used to treat adult fleas on animals are fipronil (Frontline) and imidacloprid (Advantage).

The second part of managing fleas is to control the larval stage in the pet's environment by disrupting the flea life cycle and preventing the recurrence of adult fleas.

Begin by laundering pet bedding and steam cleaning/vacuuming carpets, and treat where pets spend time such as sleeping areas, indoors and outdoors, with an insect growth regulator (IGR) to effectively control flea larvae. Pyriproxifen (Nylor, Archer) is a good IGR to use. More info available at:

<http://lancaster.unl.edu/pest/resources/integratedflea.shtml>

Ask The Expert

Core Aeration

Scott Reeder, owner Barefoot & Associates Lawn Care & Landscape Services

This time of year, I get the question many times, is aeration important or necessary? It is one service too many homeowners neglect, maybe because they cannot see the immediate benefits of the service. There are different types of equipment and homeowners can confuse a spiker as a type of aeration tool. Spikers are primarily used to prepare the soil for seed or cut runners of spreading warm season grasses, but seldom used by quality lawn care companies. A spiker can actually increase compaction as it makes an opening in the soil pushing the soil tighter to the sides and not removing any material.



Diagram courtesy of
Scott Reeder

The most beneficial type of aeration is core aeration. Core aerators actually remove a plug from the soil 2-3" in most cases. By removing a plug, you are allowing air, water and nutrients into the soil and to the roots. Core aeration also will reduce the thatch layer. This process also relieves compaction which is very beneficial to healthy turf. The plugs can be raked up and removed, but it is not necessary. Rainfall and mowing will ultimately break them up and allow the loose soil to enter back into the aeration holes.

I recommend core aeration on all types of turf. All warm season turfgrasses such as Bermuda, Zoysia, Centipede and St. Augustine will benefit and should be completed during the growing season. It is not recommended to aerate late into the fall or winter as this could open up the soil profile causing winterkill or damage to warm season turfgrasses. Contrary to that, cool season turfgrasses such as Fescue, Bluegrass or Ryegrass should be aerated in the fall, generally around the time of fall over-seeding. You would not want to aerate in the middle of the summer when these types of turf are already stressed from the summer heat and dryer conditions.



Applying lime to the soil at the time of aeration is a good idea - if your lawn needs it. You can get the lime down into the soil where it is needed via the aeration holes. It is always a good practice to have a soil test every couple of years to actually know how much lime is needed. You can get the necessary information at your local County Extension Office and at certain times of the year, this is a free service.

Monthly Garden Tasks

JULY GARDEN TASKS

GENERAL IDEAS

- Water deeply but infrequently, this will encourage deep rooting of plants for better drought resistance.
- Control fungal diseases which flourish in hot and humid weather by keeping irrigation water off foliage. The best time to water is early morning. This allows the sun to dry water from foliage. Watering in early evening creates damp foliage all night which encourages the development of fungal diseases.
- Help reduce the mosquito population by emptying any containers with standing water. Mosquito larva can grow in shallow water, like plant saucers that do not dry completely.



LAWN CARE

- When should you water your lawn? When the grass blades are just starting to curl and your footprints remain on the lawn when you walk on it. Watering too often encourages a lawn with a shallow root system that cannot handle drought well. Apply an inch of water, in the early morning. Set your timer for 4 am if you can.
- Grasses vary in their needs. Check out the Lawn Maintenance Calendar for your grass and learn how best to care for it, month by month...

Bermuda - <http://www.turffiles.ncsu.edu/turfgrasses/bermudagrass/lawn-maintenance>

Centipede - <http://www.turffiles.ncsu.edu/turfgrasses/centipedegrass/lawn-maintenance>

Zoysiagrass - <http://www.turffiles.ncsu.edu/turfgrasses/zoysiagrass/lawn-maintenance>

St. Augustinegrass - <http://www.turffiles.ncsu.edu/turfgrasses/st-augustinegrass/lawn-maintenance>

Tall Fescue - <http://www.turffiles.ncsu.edu/turfgrasses/tall-fescue/lawn-maintenance>

- Keep fescue mowed at a height of 3 - 3 1/2 inches to help it survive hot, dry periods. It is a cool season grass that slows down in the summer. If it is cut too short, the tender roots will be exposed to extreme heat which will certainly damage, if not kill them. It is also difficult for fescue to recover from cutting too short as it is not actively growing at this time.
- Repair Warm-Season Lawns: Bermuda, Zoysia, and centipede are growing strong by now, making it easy to see spots that are weak or weedy. Pull weeds and patch bare spots if you haven't already.
- Established fescue lawns naturally go semi-dormant in the heat of July. Established fescue can survive up to three weeks without water, but will need a drink if it doesn't rain by then! Water only when grass shows sign of wilt (footprints show when grass is walked on). Fescue planted last fall will need watering every week. See the Fescue Lawn Maintenance Calendar (link above).

TREES, SHRUBS & ORNAMENTALS

- When you visit your roses, clip off leaves that show early evidence of blackspot - a common fungal disease that causes black spots on leaves. Put the spotted leaves in the garbage (not in the compost pile.)
- When gathering cut flowers to bring indoors, cut stems early in the day. Bring them indoors and recut the ends while they are submerged in a sink of water.
- Don't use Japanese beetle traps. The pheromones in the traps often attract beetles that would not otherwise visit the area. To control a particularly pesky group of beetles, go hunting for them in early morning and shake them into a bowl of soapy water to get rid of them.
- Keep potted plants watered! Plants in pots outside may need daily watering in the heat of summer.
- Pinch out the tips of garden mums to encourage lower, compact plants with many flowers.
- Start stem cuttings of geraniums and leaf cuttings of succulents to be potted for use as house plants

this winter.

- Propagate shrubs by rooting cuttings. Semi-hardwood cuttings of Azalea, Camellia, and Holly can be taken this month. The wood should be hardened enough that the stem breaks when bent.
<http://www.ces.ncsu.edu/depts/hort/hil/hil-8702.html>
- Prune spent crape myrtle blossoms to prolong the flowering period.
- Sooty Mold on the crape myrtles will make the leaves appear dark and sooty or almost uniformly charcoal gray. Sooty mold grows on honeydew (the sticky leftovers) from aphids. Control the aphids, and the mold will wash off.
- Powdery Mildew makes leaves appear gray and powdery. It's a common problem which disfigures the foliage, but doesn't kill the tree.
- Hand-pick bagworms off evergreens. Pesticides are not effective once the caterpillars are safe in their bags.
- Remove vigorous upright sprouts growing from tree roots ("suckers"), or from the upper surfaces of tree branches ("water sprouts"). Pruning the sprouts out directs the tree's energy into desirable growth.
- Weed when it's easy. Weeds are easier to pull when the soil is moist, so wait until after a soaking rain or irrigate the area first. The roots of desirable plants can be injured by pulling large weeds nearby so pull those weeds in late afternoon or on cloudy days, and water the area afterward to help injured plants recover.
- Start seeds for cool-weather annuals indoors in July/August for fall planting. Try foxglove, pansy, alyssum, snapdragons, ornamental cabbage (kale), and primroses. Pansy seeds germinate well when stored in the refrigerator (not freezer) for 10-14 days before planting.

FRUITS & VEGGIES

- Pinch out the tips of blackberry shoots when they reach about 4 feet tall. This helps form a tidier hedgerow for easy picking.
- Soon after tomatoes begin to set fruit, give them a boost of fertilizer to keep them vigorous and productive. Most of the new varieties are heavy producers if provided with good nutrition and adequate soil moisture.

LANDSCAPE IDEAS

- Deckscape: Play with colors, textures, and the placement of furniture on your deck or patio. Use container-grown plants, windsocks and sculptures to change or fine-tune your color scheme and overall feel.
- Think strategy. Now that deciduous trees and shrubs are in leaf, survey your landscape critically. Do you have too much? too little? are plants too low where screening is needed? So tall a view is blocked? Take photographs and make plans to add or move shrubs this fall. Don't do it now.

WILDLIFE

- Put out a bird-bath. Keep it filled with fresh water. Change it once a week to minimize mosquitoes. Birds will pay you back by eating lots of insects!
- Think twice about squashing caterpillars; many turn into butterflies. This is just one example of what swallowtail caterpillars look like. This is a swallowtail butterfly(right). Swallowtail caterpillars (left) love parsley, so set out a few extra plants to share with them. A pan of moistened pebbles or sand will attract butterflies.

Cool Connections

[NC Extension Gardener Manual](#)

[Past Issues of Gardeners Dirt](#)

[NCSU Publication Links](#)

[NC Extension Gardening Portal](#)





Upcoming Events

A-Z Gardening Class

Classes have just started but you are still welcome to join. During this 12 week class you will learn about vegetable gardening and have the opportunity for hands on experience as well. The gardening class will meet weekly on Wednesday evenings from 6:30pm until 8:00pm at the Clayton Community Center located at 715 Amelia Church Road in Clayton. To register for the class come by the Clayton Community Center.

JOCO Plants Summer Nursery and Landscape Trade Show - July 13th

The Trade Show will be held at the Kerr Scott Building, NC Fairgrounds 1025 Blue Ridge Blvd., in Raleigh on **July 13th** from 9:00am until 3:00pm. Many nurseries from the Johnston County Nursery Marketing Association will display their plants and many landscape vendors will be there as well. It's a great opportunity to talk to growers. Registration for a 2 hour demonstration on "Hardscape Best Practices" class is from 9-9:30am. You will learn the correct way to install segmental retaining walls and interlocking concrete pavers. A "Plant Walk" with Mark Weathington from the JC Raulston Arboretum on the trade show floor begins at 1:30pm until 2:30pm. His class will take participants through the nursery vendors display space highlighting plants which are new or underutilized in the trade with particular emphasis on plants that solve problems.

<http://jocoplants.com/announcements/>

Johnston County Farm & Food Counsel Brown Bag Luncheon - July 13th

July 13th from 12-1pm, Brown Bag Luncheon(first in a series), an informal conversation about Food Councils. Discussion, Networking, & Learning about Food Councils in NC, Johnston County, and local food issues & opportunities. Where: Johnston County Ag Center Auditorium; 2736 NC 210, Smithfield NC 27577

NEWSLETTER EDITED BY: Brooke Taylor

*** If you would like to receive this newsletter monthly via email, send an email to mhwarren@ncsu.edu asking to be added to "The Gardener's Dirt" email list.

Distributed in furtherance of the acts of Congress of May 8 and June 30, 1914. North Carolina State University and North Carolina A&T State University commit themselves to positive action to secure equal opportunity regardless of race, color, creed, national origin, religion, sex, age, veteran status, or disability. In addition, the two Universities welcome all persons without regard to sexual orientation. North Carolina State University, North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.

Disclaimer agrichemicals:

Recommendations for the use of agricultural chemicals are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial products or services in this publication does not imply endorsement by North Carolina Cooperative Extension nor discrimination against similar products or services not mentioned. Individuals who use agricultural chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Be sure to obtain current information about

usage regulations and examine a current product label before applying any chemical. For assistance, contact your county Cooperative Extension agent.

Contact: **Marshall Warren**, Extension Agent Commercial and Consumer Horticulture

2736 NC 210 Hwy, Smithfield, NC 27577
919-989-5380



[Home Horticulture in
Johnston County,
NC](#)

[Johnston County NC
Extension Master
Gardener Volunteers](#)